Platax 13: 73-77, 2016

New record of the squat lobster *Munida olivarae* from Southern Taiwanese coral reef

Chiawei Lin [1,2]

[1]Department of Exhibition, National Museum of Marine Biology and Aquarium, Pingtung 944, Taiwan, R.O.C.

[2]Institute of Marine Biology, National Dong Hwa University, Hualien 974, Taiwan, R.O.C.

Abstract

The squat lobster *Munida olivarae* Macpherson, 1994 was recorded for the first time in Taiwan based on material collected from coral reef off the southwestern coast. Color illustrations and underwater photographs were provided for these novel Taiwanese specimens.

Keywords: coral reef, squat lobster, *Munida*, new record, Taiwan

Introduction

The genus *Munida* Leach, 1820 contains more than 240 species and is one of the most speciose groups of squat lobsters (Baba et al., 2008). Of these 240 species, 176 are found in the Pacific Ocean, and 27 occur in Taiwan (Baba et al., 2009). Among the species found in Taiwan, the specimens have mostly been collected from the continental shelf and slope at depths greater than 200 m. All of squat lobsters are not to belong the economic species and always can be found from the by-catch in the fishing port.

Materials and Methods

Shallow-water (5-30 m) coral reef SCUBA surveys in southwestern Taiwan were performed as part of routine crustacean biodiversity assessments of the area (*sensu* ref.). Such surveys revealed some squat lobsters of similar appearance to those of the genus *Munida* in coral rubble habitats. A more thorough examination of the four specimens in the

laboratory identified them as *M. olivarae*, the first such record of this species from coral reefs in Taiwan. The specimens were deposited in the decapod crustacean collection of the National Museum of Marine Biology and Aquarium (NMMBCD). The general terminology and taxonomic structure outlined below follows Baba et al. (2009). Briefly, the carapace length (CL), a proxy for specimen size, was measured as the distance between the orbital and posterior margins of the carapace along the midline.

Taxonomy

Munididae Ahyong et al., 2010

Munida Leach, 1820

Munida olivarae Macpherson, 1994

(Figs. 1-2)

Munida olivarae Macpherson, 1994: 505, figs. 36, 80. — Osawa & Okuno, 2002: 132, figs. 2, 5B. — Kawamoto & Okuno, 2003: 97. — Macpherson, 2004: 268. — Baba, 2005: 270. — Kawamoto & Okuno, 2006: 97. — Baba et al., 2008: 110.

Material examined. —All specimens were collected on SCUBA from Kenting National Park, Pingtung County, Taiwan. 18 m, 14 April 2012, 1 male 4.6 mm CL. (NMMBCD 4066); 29 m, 29 April 2012, 1 male 6.0 mm CL. (NMMBCD 4067); 28m, 01 February 2013, 1 ovigerous female 4.8 mm CL. (NMMBCD 4068); 22m, 15 March 2013, 1 ovigerous female 5.5 mm CL. (NMMBCD 4069)

Diagnosis. — Branchial margin of carapace with 5 spines. Rostrum spiniform; supraocular spines not reaching to corneae. Frontal margin distinctly oblique. Abdominal somite 2 unarmed. Sternal plastron with smooth surface; anterior margin of sternite 4 slightly narrower than sternite 3. No granules on postero-lateral part of sternal plastron. Eyes large, corneal width distinctly greater than distance between sinus formed by supraocular and rostral spines. Basal article of antennular peduncle with distomesial spine longer than distolateral spine. Antennal article 1 with distomesial spine not reaching or slightly reaching end of article 2; distomesial spine of article 2 reaching article 3. Maxilliped 3 merus with a small spine on extensor distal margin. Fixed and movable fingers of P1 with a row of spines along lateral and mesial margin, respectively. P2–4 dactyli slightly shorter than propodus length, with movable spinules along entire flexor margin.

Coloration. — Color of carapace and abdominal somites reddish. Rostrum and supraocular spines orange. Second to fourth abdominal segments with white spots. Walking legs with transverse red and white bands. Palm and distal half of fingers orange; proximal half of fingers orange.

Fig. 1. Ovigerous female specimen (5.5 mm) (NMMBCD 4069)of *Munida olivarae* Macpherson, 1994 collected by the author: dorsal view of fresh specimen.

Fig. 2. *in situ* photograph of *Munida olivarae* Macpherson, 1994, inhabiting rubble coral.

Habitat. — Commonly inhabit small crevices in the coral reef or rocky reef slopes; usually 6 to 30 m, though deepest record from 190 m (Macpherson, 1994).

Distribution. — New Caledonia, Loyalty Islands, Matthew & Hunter Islands, Tonga, Okinawa, and now Taiwan.

Remarks. —The four Taiwanese specimens examined agreed well with the description of *M. olivarea* of Macpherson (1994). Osawa and Okuno (2012) pointed out that no or few coarse granules were present on the lateral parts of the seventh thoracic sternite and the branchial margins of carapacewith 4-5 spines in the specimens from Okinawa. In our specimens, the lateral parts of the seventh thoracic sternite were smooth. The branchial margin of the carapace was armed with five spines, except in one ovigerous female, in which there were four spines on the right side. *M. olivarea* is very easily found in Taiwan and seems to be the dominant species of the genus *Munida* in the coral reef.

ACKNOWLEDGEMENTS

This work was funded by research grants from the National Museum of Marine Biology and Aquarium and the Ministry of Science and Technology of Taiwan, R.O.C.

References

Ahyong S. T., K. Baba, E. Macpherson & G.C.B. Poore. 2010. A new classification of the Galatheoidea (Crustacea: Decapoda: Anomura). Zootaxa, 2676: 57–68.

Baba, K. 2005. Deep-sea chirostylid and galatheid crustaceans (Decapoda: Anomura) from the Indo-West Pacific, with a list of species. Galathea Reports, 20: 1–317.

Baba, K., E. Macpherson, G.C.B. Poore, S.T. Ahyong, A. Bermudez, P. Cabezas, C.W. Lin, M.N.C. Rodrigues & K. Schnabel. 2008. Catalogue of squat lobsters of the world (Crustacea: Decapoda: Anomura—families Chirostylidae, Galatheidae and Kiwaidae). Zootaxa, 1905: 1-220.

Baba, K., E. Macpherson, C.W. Lin, T.Y. Chan. 2009. Crustacean fauna of Taiwan: squat lobsters (chirostylidae and galatheidae). National Taiwan Ocean University, Keelung. 311 pp. Figs. 1-270.

Kawamoto, T. & J. Okuno. 2003. Shrimps and Crabs of Kume Island, Okinawa. Hankyu Communications, Tokyo, 174 pp.

Kawamoto, T. & J. Okuno. 2006. Shrimps and Crabs of Kume Island, Okinawa. Second edition. Hankyu Communications, Tokyo, 175 pp.

Leach, W.E. 1820. Galatéadées. In: Dictionnaire des Sciences Naturelles. F. G. Levreault, Paris, pp. 49–56.

Macpherson, E. 1994. Crustacea Decapoda: Studies on the genus Munida Leach, 1820 (Galatheidae) in New Caledonia and adjacent waters with descriptions of 56 new species. In: Crosnier, A. (ed.), Résultats des Campagnes MUSORSTOM, volume 12. Mémoires du Muséum National d'Histoire Naturelle, Paris, 161: 421–569.

Macph*erson*, E. 2004. Species of the genus Munida Leach, 1820 and related genera from Fiji and Tonga (Crustacea: Decapoda: Galatheidae). In: Marshall, B.A. & Richer de Forges, B. (ed.s), Tropical Deep-Sea Benthos, volume 23. Mémoires du Muséum National d'Histoire Naturelle, Paris, 191: 231–292.

Osawa, M. & J. Okuno, J. 2002. Shallow-water species of the genus Munida (Crustacea, Decapoda, Anomura, Galatheidae) from the Ryukyu and Ogasawara Islands, southern Japan. Bulletin of the National Science Museum, Tokyo, Series A (Zoology), 28: 129–141.